

## WHAT IS CLAIMED IS:

1. A dehumidification system, comprising:
  - a dehumidifier;
  - a user interface;
  - 5 a humidity sensor for determining relative humidity of an area;
  - means carried by said user interface for selecting a desired humidity for said area; and
  - a controller interconnected with said dehumidifier, said humidity sensor, and said selecting means, and wherein said controller activates said dehumidifier when
  - 10 said relative humidity is higher than said desired humidity.
2. The dehumidification system as recited in claim 1, wherein said dehumidifier, said user interface, and said controller are connected by electrical wiring.
3. The dehumidification system as recited in claim 1, wherein said dehumidifier, said user interface, and said controller are connected by wireless
- 15 connection.
4. The dehumidification system as recited in claim 1, further comprising a plurality of fans that are connected to said dehumidifier.
5. The dehumidification system as recited in claim 1, wherein said user interface unit includes a service light.
- 20 6. The dehumidification system as recited in claim 1, wherein said user interface unit includes a display, wherein said display shows said relative humidity, said desired humidity, and the temperature of said area.
7. The dehumidification system as recited in claim 1, wherein said user interface unit includes a power input.
- 25 8. The dehumidifier as recited in claim 1, further comprising a building material moisture sensor for measuring the building material moisture in said area and means for selecting a desired building material moisture, wherein said controller activates said dehumidifier when said actual building material moisture is higher than said desired building material moisture.
- 30 9. The dehumidifier as recited in claim 8, wherein said controller activates said dehumidifier either when said relative humidity is higher than said desired humidity or when said building material moisture is higher than said desired building material moisture.

10. A method for maintaining the moisture level of an area at or below a pre-selected level, comprising:

installing a dehumidifier;

installing a user interface;

5 installing a humidity sensor for determining relative humidity of an area;

installing means for selecting a desired humidity for said area;

installing a controller; and

connecting said dehumidifier, said user interface, said humidity sensor, said selecting means, and said controller, wherein said controller activates said dehumidifier  
10 when said relative humidity is higher than said desired humidity.

11. The method as recited in claim 10, further comprising installing at least one fan.

12. The method as recited in claim 11, further comprising connecting said at least one fan to said dehumidifier.

15 13. The method as recited in claim 10, further comprising installing a building material moisture sensor for measuring wood moisture.

14. The method as recited in claim 13, further comprising installing means for selecting a desired building material moisture, wherein said controller activates said dehumidifier when said building material moisture is higher than said desired building  
20 material moisture.

15. The method as recited in claim 10, wherein said user interface has a display that is remote from said humidifier.

16. The method as recited in claim 15, wherein said display includes said selecting means.

25 17. The method as recited in claim 16, further comprising selecting a desired humidity.

18. The method as recited in claim 10, wherein said connecting step is done by wireless connection.

30 19. The method as recited in claim 10, wherein said connecting step is done by electrical wiring.

20. The method as reciting in claim 10, further comprising connecting said dehumidifier, said user interface, said humidity sensor, said selecting means, and said controller to an alarm system.

21. A monitoring system, comprising:  
a sensor for determining the humidity, moisture, and/or temperature of an area;  
a first controller that is connected to said sensor, said first controller capable of  
receiving multiple inputs including a humidity input, a moisture input, and a  
5 temperature input;

means for communicating the humidity, moisture, and/or temperature to said  
first controller;

means for warning when the humidity, moisture, and/or temperature within said  
area is above a preset, desired humidity, moisture, and/or temperature, said warning  
10 means being connected to said first controller; and

means for adjusting the humidity, moisture, and/or temperature to approximately  
equal to or below the preset, desired humidity, moisture, and/or temperature, said  
adjusting means being connected to said warning means.

22. The monitoring system as recited in claim 21, wherein said adjusting means  
15 includes a dehumidification system, comprising:  
a dehumidifier;

a user interface;

a humidity sensor for determining relative humidity of an area;

means carried by said user interface for selecting a desired humidity for  
20 said area; and

a second controller interconnected with said dehumidifier, said humidity  
sensor, and said selecting means, and wherein said second controller activates said  
dehumidifier when said relative humidity is higher than said desired humidity

23. The monitoring system as recited in claim 22, further comprising a  
25 ventilation system connected to said dehumidification system

24. The monitoring system as recited in claim 21, wherein said adjusting means  
includes a dispatched repair person

25. The monitoring system as recited in claim 21, further comprising means for  
warning said first controller when said adjusting means has malfunctioned and is in need  
30 of maintenance.

26. The monitoring system as recited in claim 21, wherein said sensor, said first  
controller, said communicating means, said warning means, and said adjusting means  
are electrically connected.

27. The monitoring system as recited in claim 21, wherein said sensor, said first controller, said communicating means, said warning means, and said adjusting means are connected by radio frequency communication.

5 28. The monitoring system as recited in claim 21, wherein said sensor, said first controller, said communicating means, said warning means, and said adjusting means are connected by wireless communication.

29. The monitoring system as recited in claim 21, wherein said sensor includes a single sensor in a single housing for detecting one of humidity, moisture, and temperature.

10 30. The monitoring system as recited in claim 21, wherein said sensor includes multiple sensors in a single housing for detecting a combination of humidity, moisture, and temperature.

15

20